

MELTMASTER

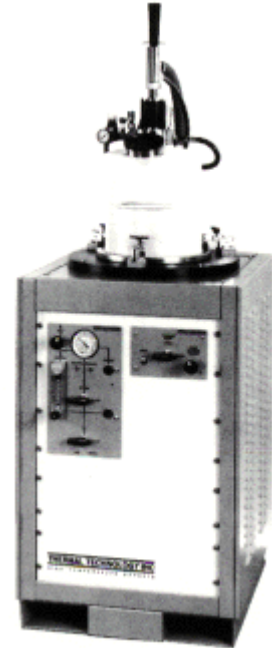
FOR THE PREPARATION OF HIGH PURITY MELTS

APPLICATIONS:

- Powder melting
- Arc casting
- Metallic and non-metallic buttons
- Annealing
- Compound synthesis
- Material densification

MAIN FEATURES:

- Ease of operation
- Extremely dependable and versatile
- Low initial cost
- Instant high temperature
- Accepts variety of hearth configurations
- Extremely pure melts
- Provision for titanium getter



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GENERAL DESCRIPTION

Because of its simplicity, ease of access into the furnace, and small volume, the furnace is easily purged. Work specimens are, therefore, very quickly prepared and a very high degree of purity is maintained.

Astro Model BJ Arc furnace consists of a water-cooled stainless steel Bell Jar hinged from a fixed baseplate. Clamps are provided for operation at slightly positive pressure. The electrode (stinger) shaft penetrates down through the Bell Jar top. The hearth is water-cooled copper with interchangeable top surface.

A light and window are provided for observation inside the Bell Jar. The stinger is sealed to the Bell Jar top by means of a ball joint and stainless steel bellows. Pressure compensation for "zero feel" is incorporated into the design of this seal.

Provision is made for attachment to a vacuum pump for evacuation prior to back filling with inert gas. Also included are ports and gauges for inert gas.

TYPICAL SYSTEM

A typical system consists of:

- Basic furnace
- Evacuation kit
- Inert gas kit
- Power cables
- Power supply

- Base cabinet

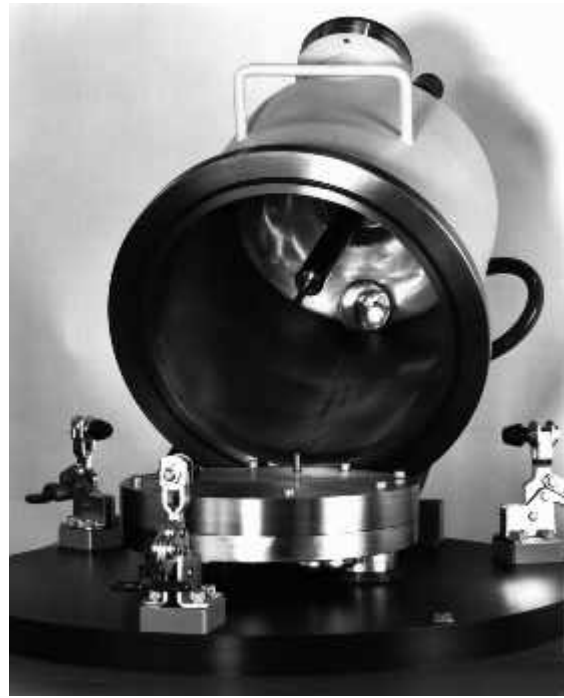
REQUIREMENTS

Electrical : Up to 1000 Amps D.C. welding type power supply

Water : 4 GPM @ 50 PSI and 70 蚌 (30.4 LPM @ 3.5 Kgs/cm²)

Evacuation Pump: 2 CFM (56.6 LPM) vacuum pump

Inert Gas : 2-10 CFM (56.6-283.2 LPM)



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SPECIFICATIONS

Maximum Temperature : Over 3000 蚌]

Hearth: 9" (22.9 cm) O.D. water-cooled copper

Bell Jar: 10" (24.4 cm) dia. x 11 1/2" high (29.2 cm) stainless steel water - jacketed

Stinger Tip : 1/4" (6.4 mm) dia.

thoriated tungsten rod

Arc Starter : 1/4" (6.4 mm) dia. thoriated tungsten rod

Power Cables : Two (2) 6' (1.8 M) long water-cooled

Base Plate: 18.5" (47 cm) dia. aluminum

Weight: (Less power supply): 45 lbs. (20.4 Kgs.)

Light: At Bell Jar top, 7.5 watts

Window : View port at Bell Jar top

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